



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/800,716

03/16/2004

Katsumasa Hijikata

2004-0416A

1033

513 7590 05/16/2007
WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

SHINGLETON, MICHAEL B

ART UNIT

PAPER NUMBER

2815

MAIL DATE

DELIVERY MODE

05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/800,716

Applicant(s)

HIJIKATA ET AL.

Examiner

Michael B. Shingleton

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 23, 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

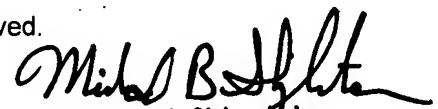
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


Michael B Shingleton
Primary Examiner
Group Art Unit 2815

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/06 One Sheet.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION***Claim Rejections - 35 USC § 112***

Claims 2, 3, 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, when claim 1 is limited to the variable inductor and claim 2 which depends of claim 1 recites that the signal generator also includes the variable resistor, the original disclosure does not present such subject matter where the signal generator includes both the variable inductor and the variable resistor. Similarly when claim 1 is limited to the variable resistor and claim 3 which depends on claim 1 recites that the signal generator also includes the variable inductor the original disclosure does not present such subject matter where the signal generator includes both the variable inductor and the variable resistor. Note that the word includes means in addition to. Note that clearly the same reasoning also applies for claims 17 and 18.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 16 and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ishii et al. US 5,280,641 (Ishii).

Art Unit: 2815

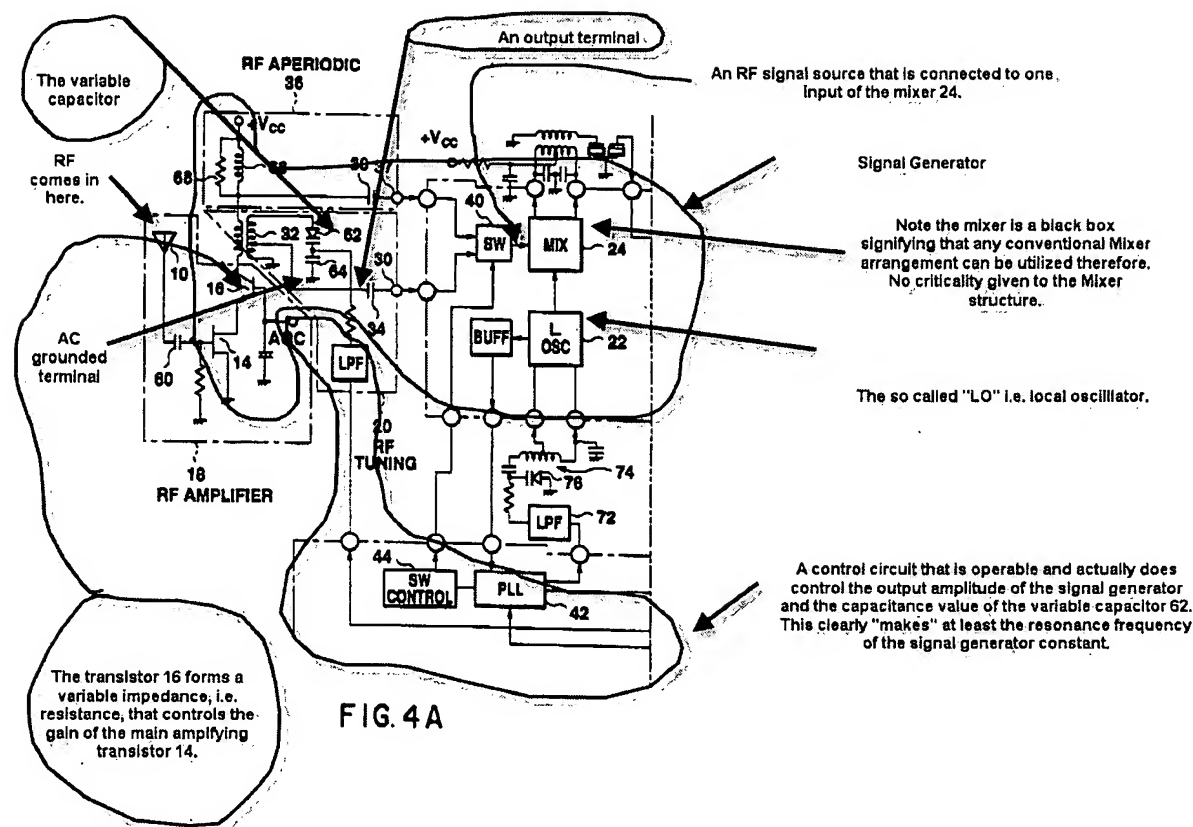


Figure 4A of Ishii

Figure 4A and the relevant text of Ishii discloses a variable gain amplification circuit having a signal generator as indicated above whereby element 16 forms a variable resistor element that is also part of the load for the source/drain of the main amplifying transistor 14. Element 62 is a variable capacitor that is connected between the output terminal i.e. the tap on secondary 32 and an AC ground, i.e. note the ground symbol. As indicated in the above the circuitry that provides the control signal for the variable capacitor and the AGC signal forms the claimed control circuit. The control signal V_T for the variable capacitor clearly controls the capacitance value of the variable capacitor 62. The claims now recite, i.e. have been amended to recite that the capacitance *makes* either the cutoff frequency or the resonance frequency of the signal generator constant. This is what happens in Ishii. Note that although the signal V_T may vary for a short period the value the signal does settle down to a single value and remains there

Art Unit: 2815

till the tuning point is changed thereby making the resonance frequency of the signal generator constant that also corresponds to the maximum point of signal strength.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 15, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. US 5,280,641 (Ishii).

Claim 15 recites that the RF signal source has a "signal band", i.e. bandwidth??? equal to or larger than 100MHz. Ishii is silent on this particular bandwidth setting. However, selecting the values and quality of the passive elements like the capacitor is merely the discovery of the workable range for the circuit of Ishii. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the values of the circuit elements in Ishii to achieve a 100MHz or greater bandwidth, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105, USPQ 233.

The signal generator of Ishii also includes a Mixer 24 but Ishii is silent on the details of the construction of the mixer itself. Also Ishii includes a Local Oscillator 22, i.e. "LO"???. It is well known that one art recognized equivalent form of mixer is on one that has a variable gain. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the mixer 24 of Ishii with one that has a variable gain because as the Ishii reference is silent on the exact details of the construction of the mixer 24 one of ordinary skill in the art would have been motivated to use any art-recognized equivalent mixer such as a variable gain mixer

Applicant's arguments with respect to claims of record have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Art Unit: 2815

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571) 272-1770.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker, can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MBS
April 20, 2007


Michael B Shingleton
Primary Examiner
Group Art Unit 2815